BDA

BRUHAT BANGALORE MAHANAGARA PALIKE

SL No	Name of Work:- Package 3 Consists of 5 Works
1	Improvements to roads and drains at Thanisandra and Surrounding area in Ward No 06 Byatarayanapura sub division
2	Improvements to roads and drains at Dasarahalli and Surrounding area in Ward No 06 Byatarayanapura sub division
3	Improvements to roads and drains at Saraipalya, Bharathnagar and Surrounding area in Ward No 06 Byatarayanapura sub division
4	Improvements to roads and drains at Rachenahalli and Surrounding area in Ward No 06 Byatarayanapura sub division
5	Comprehensive Development of roads and drains in Ward No 07, Kodigehalli Sub Division

EE

Bill of Quantities

SL No	Description of Item	Unit	Quantity	Rate as per Estimate in Rs		Amount in Rs.
				In figures	In Words	
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications(P.No-143 &136 ,I No-19.1&17.4& 17.1) 5km lead= 57+2.0x1.28x5=69.80	Cum	12,850.68	211.79	Rupees Two Hundred Eleven and Paise Seventy Nine Only	27,21,645.52
2	Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No.27, I.No.5.33 of PW, P&IWTD SR 2018-19)	sqm	8,256.83	111.3	Rupees One Hundred Eleven and Paise Thirty Only	9,18,984.75
3	Removing and resetting of footpath slab (P.No.270, I.No.37.56 of PW, P&IWTD SR 2018-19)	sqm	423.00	208.82	Rupees Two Hundred Eight and Paise Eighty Two Only	88,330.86
4	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.27, I.No.5.31.1 of PW, P&IWTD SR 2018-19)	sqm	1,051.69	742	Rupees Seven Hundred Forty Two Only	7,80,356.86
5	KSRRB M2900-1. Plain cement concrete M10 mix with crushed stone aggregate 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing including cost of materials, labour, HOM complete as per specifications. MORTH Specification No. 408 (P.No.254, I.No.34.1 of PW,P&IWTD S.R 2018-19)	Cum	204.57	4479.56	Rupees Four Thousand Four Hundred Seventy Nine and Paise Fifty Six Only	9,16,383.59
6	KSRB 5-11 : Providing and constructing load bearing wall with having block density not less than 1800 kg/m3 and having a minimum average compressive strength 5.00 N/mm2 confirming to IS 2185 (Part 1):2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials labour charegs, scaffolding, curing, hire charges of machineries etc., complete as per specifications. KBS No.5.4 .-do- solid concrete blocks of size 400x150x200 mm (Page No.27. litem no.5.27.2 of KPWD S.R Bangalore Circle (2018-19)	Sqm	56.00	1010.18	Rupees One Thousand Ten and Paise Eighteen Only	56,570.08
7	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar & stone hammerd dressed in courses not less than 20 cms high, bond stones at 2m. apart in each course including cost of materials, labour, HOM, curing c	Cum	19.44	4871.76	Rupees Four Thousand Eight Hundred Seventy One and Paise Seventy Six Only	94,707.01
8	Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, for coping. Including cost of all materials, labour, HOM, curing complete as per specifications.Specification No. KBS 4.1, 4.2(P.No 255, I.No.34.11 of PW,P&IWTD S.R 2018-19)	Cum	8.56	5599.98	Rupees Five Thousand Five Hundred Ninety Nine and Paise Ninety Eight Only	47,947.03
9	Providing laying plain/ reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. With 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43cum machine mixed, well compacted for walls and bottom including centring, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specification 15 cm wall and bottom thickness (P.No.275, I.No.37.59.1 of PW, P&IWTD SR 2018-19)	Cum	652.86	7070.2	Rupees Seven Thousand Seventy and Paise Twenty Only	46,15,850.77

SL No	Description of Item	Unit	Quantity	Rate as per Estimate in Rs		Amount in Rs.
				In figures	In Words	
10	34.17 Providing and laying in position plain/Reinforced cement cement concrete M20 for sub structure/Superstructure works, with cement @ 320 kgs, 20 mm & down size graded granite metal coarse aggregate @ 0.69 cum and fine aggregates @ 0.46 cum machine mix	Cum	65.52	5277.74	Rupees Five Thousand Two Hundred Seventy Seven and Paise Seventy Four Only	3,45,797.52
11	KSRRB M2200-6. Providing T.M.T. steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever	Tonne	37.89	72326.98	Rupees Seventy Two Thousand Three Hundred Twenty Six and Paise Ninety Eight Only	27,40,469.27
12	Providing and laying 100mm thick pre-cast cover slabs over drains of width not exceeding 800 mm using M20 concrete reinforced with steel @ 6.00 kg/Sqm, slabs jointed in CM 1:3 proportion and nicely finished including providing holes in the Cover slabs wherever necessary for easy drainage of surface water including of labour, materials, HOM of machineries, curing, lead and lift charges etc, Complete as per MORTH specifications No. 1500, 1700. (P.No.272, I.No.37.66 of PW,P&IWTD SR 2018-19)	Sqm	2,372.00	1145.86	Rupees One Thousand One Hundred Forty Five and Paise Eighty Six Only	27,17,979.92
13	Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and l	Sqm	1,053.40	5418	Rupees Five Thousand Four Hundred Eighteen Only	57,07,321.20
14	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications MORTH Specificatio MORTH Specification No.301with 4km lead= (I No-19.14,P No-143)	Cum	30,304.24	54.31	Rupees Fifty Four and Paise Thirty One Only	16,45,823.27
15	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)	Cum	20,168.36	2001.28	Rupees Two Thousand One and Paise Twenty Eight Only	4,03,62,535.50
16	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.158, I.No.21.6 of PW,P&IWTD SR 2018-19)	sqm	80,673.43	28.62	Rupees Twenty Eight and Paise Sixty Two Only	23,08,873.57
17	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.158, I.No.21.2 of PW,P&IWTD SR 2018-19)	sqm	67,522.37	5.3	Rupees Five and Paise Thirty Only	3,57,868.56
18	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.158 I.No.21.7 of PW,P&IWTD SR of 2018-19)	sqm	1,87,281.90	12.72	Rupees Twelve and Paise Seventy Two Only	23,82,225.77
19	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6)	Cum	2,077.91	6597.44	Rupees Six Thousand Five Hundred Ninety Seven and Paise Forty Four Only	1,37,08,853.56

SL No	Description of Item	Unit	Quantity	Rate as per Estimate in Rs		Amount in Rs.
				In figures	In Words	
20	Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4% of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic) (P.No.171, I.No.21.78.12 of PW,P&IWTD SR 2018-19) As per Issue rate dated: 03/01/2020	Cum	5,828.95	7753.90	Rupees Seven Thousand Seven Hundred fifty three and Paise ninety Only	4,51,97,095.41
21	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)	sqm	6,058.50	454.74	Rupees Four Hundred Fifty Four and Paise Seventy Four Only	27,55,042.29
22	KSRRB M600-1. Construction of dry lean cement concrete mix CC1:5:10 with OPC cement @160Kgs, with 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @ 0.58cum Sub- base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383) aggregate cement ratio not to exceed 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. . MORTH V Revision Specification No. 601, IS 456 Table-5. with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with fixed form paver .((P.No.174, I.No.22.1.2 of PW,P&IWTD SR 2018-19)	Cum	3,085.91	3884.90	Rupees Three Thousand Eight Hundred Eighty Four and Paise Ninety Only	1,19,88,432.33
23	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 with OPC at 360 kg/cum and coarse aggregate 0.69cum, fine aggregate 0.46cum. over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints,including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine, and curing including cost of all materials, labour,hire charges of machineries,all lead & lift charges etc., complete as per specifications. (P.No-182,I No-22.6.1)	Cum	2,920.51	5210.96	Rupees Five Thousand Two Hundred Ten and Paise Ninety Six Only	1,52,18,634.73
24	KSRRB M2100-1.1. Earth work in excavation for foundation of structures such as culverts, bridges etc., as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications I. Ordinary soil - A. Manual Means (i) Depth upto 3m MORTH Specification No. 304(P.No.220, I.No.27.1 of PW,P&IWTD S.R 2018-19))	Cum	1,232.50	280.69	Rupees Two Hundred Eighty and Paise Sixty Nine Only	3,45,950.43
25	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift, complete as per specifications, specification. No. KBS (P.No.7, I.No.2.15 of PW,P&IWTD S.R 2018-19))	Cum	221.85	2574.74	Rupees Two Thousand Five Hundred Seventy Four and Paise Seventy Four Only	5,71,206.07

SL No	Description of Item	Unit	Quantity	Rate as per Estimate in Rs		Amount in Rs.
				In figures	In Words	
26	KSRRB M2100-13. Plain / Reinforced Cement Concrete M15 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregates @ 0.56cum in Open Foundation complete as per Drawing and Technical Specifications MORTH Specification No. 1500,1700 & 2100.(P.No.222, I.No.27.24 of PW,P&IWTD S.R 2018-19)	Cum	121.80	5,409.18	Rupees Five Thousand Four Hundred Nine and Paise Eighteen Only	6,58,838.12
27	KSRRB M2100-17.2. providing and laying Plain / Reinforced Cement Concrete design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008. open foundation complete as per drawing and technical specification including cost of all materials, labour, HOM curing, formworks, scafoling and centring complete as per specification MORTH Specification No. 1500,1700 & 2100(P.No.223, I.No.27.31 of PW,P&IWTD S.R 2018-19)	Cum	126.88	5294.7	Rupees Five Thousand Two Hundred Ninety Four and Paise Seventy Only	6,71,765.06
28	KSRRB M2200-5.12. Providing and laying Design mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.7cum and fine aggregates @ 0.47cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 - i) Upto 5m height(P.No.228, I.No.28.7.12 of PW,P&IWTD S.R S.R 2018-19)	Cum	466.90	5640.26	Rupees Five Thousand Six Hundred Forty and Paise Twenty Six Only	26,33,437.39
29	KSRRB M2200 -6 Supplying , fitting and placingTMT bar Fe 500 reinforcement in sub-structure complete as per drawing & technical specification complete as per the specification . MORTH Specification No.1600 & 2200(P.No.229 , I.No.28.8.2 of PW,P&IWTD S.R 2018-19)	Tonne	71.25	72326.98	Rupees Seventy Two Thousand Three Hundred Twenty Six and Paise Ninety Eight Only	51,53,297.33
			Total Construction Cost			16,77,12,223.78

TEJUS CONSULTANTS

No OF CORRECTION NIL

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ವಿಭಾಗ
ಬೃ.ಬೆ.ಮ.ಪಾ. ಬೆಂಗಳೂರು
Executive Engineer

DTS APPROVED

ಮುಖ್ಯ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ.